Chapter 1: Introduction

Sanford Creek Greenway

Chapter Outline:

The 2009 Open Space & Greenway Plan Update

Plan Purpose & Goals

Benefits of Open Space and Greenways

This plan makes reference to many other documents, most of which are available online. To view planning documents related to the Town of Wake Forest, please visit www.wakeforestnc.gov and click 'Our Government' followed by 'Plans and Ordinances.'

THE 2009 OPEN SPACE & GREENWAY PLAN UPDATE

The Town of Wake Forest adopted its first Open Space and Greenway Plan in January 2002. In the years since that plan's adoption, much has changed in Wake Forest and in Wake County as a whole. Aside from continued population growth and development in and around Wake Forest, there have been numerous other changes in both local and regional land use and transportation patterns. The NC 98 Bypass, which was still in the planning phase at the time of the last plan, has been partially completed, creating new opportunities and constraints for the completion of a comprehensive greenway network. No less significantly, the Town of Wake Forest has adopted three new plans of particular relevance: the Pedestrian Plan (2006), the Bicycle Plan (2008), and the Parks and Recreation Master Plan Update (2005). Each of these plans is the result of extensive data collection and public input gathering, and reflects equally important aspects of Wake Forest's transportation and sustainability goals. Similarly, the North Carolina Department of Transportation (NCDOT), the Capital Area Metropolitan Planning Organization (CAMPO), Wake County, and the City of Raleigh have all produced new comprehensive plans of various types that include goals and visions for Wake Forest as it relates to regional transportation and land use objectives. Given these numerous changes, it is necessary to update the 2002 Open Space and Greenway Plan to reflect the current conditions, and update the original recommendations. While Wake Forest changes as the result of internal and external development pressures, it is critical to continually reevaluate and update planning efforts to keep up with new opportunities and to stay ahead of potential constraints.

In short, the Open Space and Greenway Plan Update expands upon key recommendations from the 2002 Plan and provides the Town of Wake Forest with new ideas and tools to effectively create and maintain a comprehensive open space and greenway network. The Plan Update also incorporates new design standards for trails and trail amenities, trail operations and management guidelines, and current trail construction cost estimates.

INTRODUCTION

At a base level, the purpose of this updated plan is the same as that of its predecessor. The three principal goals of the 2002 Open Space and Greenway Plan were: 1) to identify parcels and corridors of land that were in need of protection and conservation measures; 2) to establish a comprehensive approach that would link greenspace lands and corridors to residential, commercial, institutional and central business areas of the community, and 3) to define a concise set of strategies for protecting and conserving these corridors and at the same time developing public use facilities that would provide residents with access to these lands and corridors.

In retrospect, the 2002 Plan was largely successful in achieving these goals. However, there are still certain aspects of these goals that need to be addressed, as well as factors influencing the means by which the goals may be achieved. Due to a number of elements such as continued development pressures, the priority parcels and corridors identified by the 2002 Plan have changed. Similarly, as new residential and commercial development has occurred, new issues involving connectivity and open space conservation have emerged that were not addressed in the initial approach outlined by the Plan. Also, as development has continued at varying intensities in each of the corridors, and both the local and regional landscapes have changed, new strategies are needed for protecting and conserving land within these corridors. Finally, as the population of Wake Forest has grown and new planning efforts have been undertaken, new goals have emerged. The new goals of the Open Space and Greenway Plan Update, to be considered in conjunction with the goals of the 2002 plan, are as follows: ***1) provide specific recommendations for developing new priority greenway segments and facilities; 2) explore potential connections that can be derived from linking the old greenway plan to the adopted pedestrian, bicycle, and parks and recreation plans; and 3) expand on recent planning efforts for the Smith, Richland, and Sanford Creek corridors by identifying trail locations within their more broadly defined greenway corridors.***

Below: A portion of the Smith Creek corridor.

The goals for this plan, stated above, are in concert with the goals of other Wake Forest planning initiatives. Statements from the Wake Forest Land Use Management Plan, the Land Development Plan, the Parks and Recreation Plan Update, the Pedestrian Plan and the Bicycle Plan were consolidated into the following statements and goals. They demonstrate the continued importance and concerted effort to protect open space and preserve greenways in Wake Forest, as well as new priorities and functions afforded to greenway and open space planning by recent plans.

STATEMENTS AND GOALS RELATED TO OPEN SPACE & GREENWAYS

(Consolidated from other Wake Forest planning initiatives)

Parks and Open Space

- Provide a variety of land and water areas for recreation and environmental conservation through the acquisition of new park and open space land in accordance with the Parks and Recreation Master Plan.
- Provide equitably distributed recreation areas, facilities, and programs, conveniently located throughout the Town; improve accessibility to meet the basic needs of children, teenagers and adults, while also recognizing the special needs of the elderly, the disadvantaged, and the handicapped.
- Optimize the appreciation, use and stewardship of Wake Forest's historic, cultural and natural resource heritage.

Greenway, Bicycle, and Pedestrian Facilities

- Acquire, develop and maintain a system of greenways and bikeways to protect natural features, enhance the aesthetic character of the Town, create value and generate economic activity, provide viable alternative transportation options, and to improve health through active living.
- Provide safe, family-friendly bikeways and walkways that connect to various places in Wake Forest, including the library, schools, parks, shopping destinations, and regional destinations, such as Raleigh and other parts of the Triangle.
- Provide maps, signage, and events to facilitate and encourage the safe use of on- and off-road bicycle and pedestrian facilities.
- Improve connectivity and fill gaps in existing greenway, bicycle, and pedestrian facilities.

Land Development

- Encourage conservation of remaining open spaces through higher density development close to the Central Business District and in the appropriate districts.
- Development should be compatible with the natural environment, including steep slopes, soils, flood plains, and wooded areas, especially within water supply watersheds.
- Development should be regulated to limit land clearing to the minimum necessary for development.
- Prevent development in areas subject to damage due to flooding or unstable soils.

Implementation

- Promote better coordination among implementing agencies.
- Develop environmentally sensitive design principles.
- Enhance sustainability goals.
- Provide opportunities for community involvement.
- Encourage private recreation initiatives to supplement public facilities.
- Work in partnership with Wake County and adjacent municipalities to identify lands that can provide open space linkages to connect open space systems and to contribute to the overall Wake County Open Space Plan.

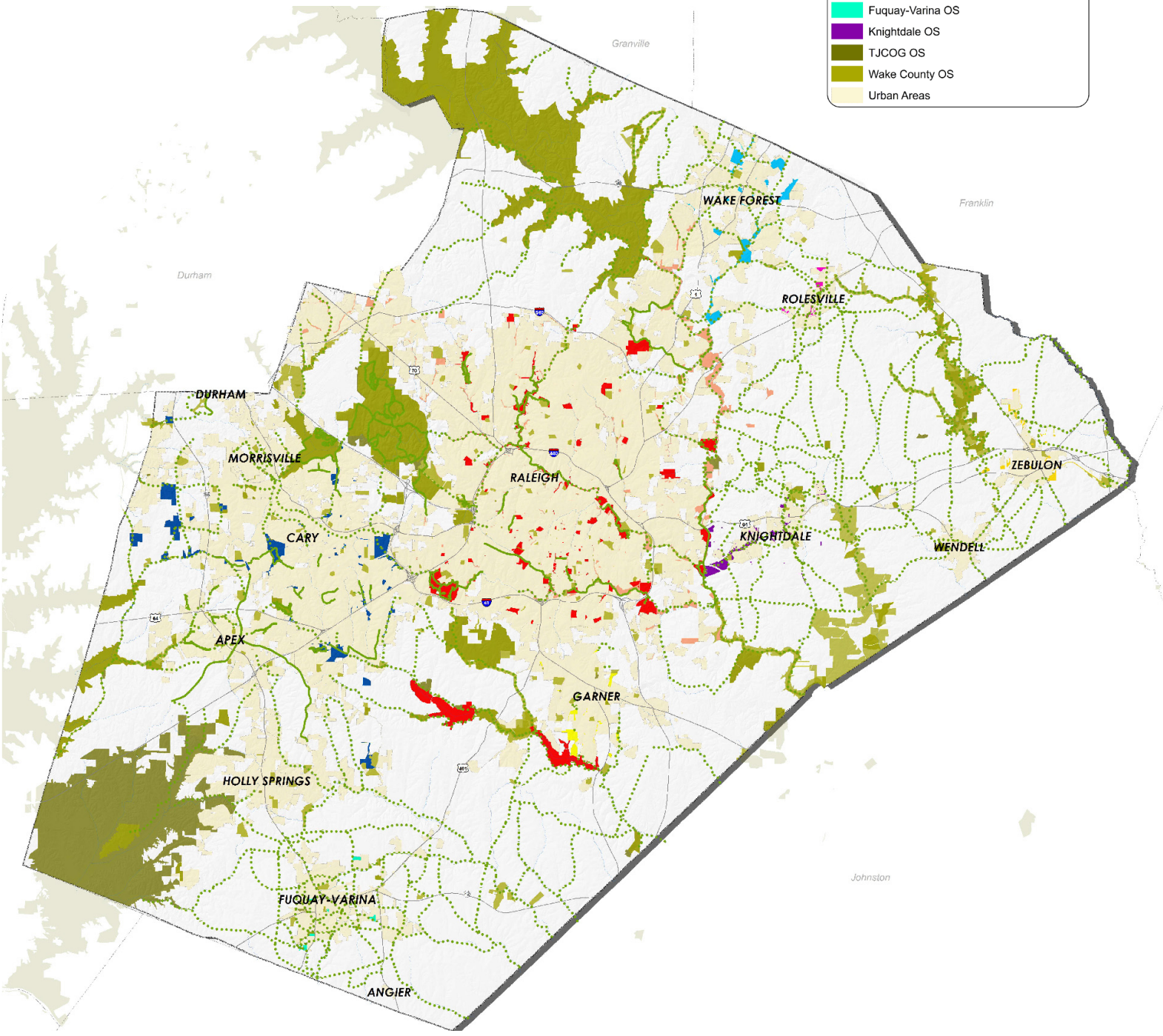
In addition to the aforementioned local plans, this Plan Update is also consistent with open space planning in Wake County. Starting in 2002, the County worked with it's twelve municipalities to support open space planning in order to preserve natural and cultural landscapes. In order to comprehensively evaluate the County's land area, and to eventually protect 30 percent of it, each municipal government was awarded a monetary grant and asked to prepare its own open space plan. The 2002 Wake Forest Open Space and Greenway Plan was one such plan, and the recommendations contained therein were combined with the recommendations of the other 11 municipalities' open space plans to collectively form the 2003 Wake County Consolidated Open Space Plan. The 2003 Plan was the first effort at developing uniform open space plans and programs throughout Wake County, and identified over 90 targeted open space areas as future priority open space acquisitions. Additionally, the Plan recommended numerous programs and policies meant to achieve balanced and sustainable growth in conjunction with an interconnected system of open spaces.

In 2006, Wake County evaluated and revised their 2003 Consolidated Open Space Plan (see map 1A, page 1-5). The 2006 Revision evaluates successes and challenges, both on a county-wide and on a municipal level, and makes recommendations on how to improve planning efforts in order to better achieve the open space conservation goals set forth in the original plan. The 2006 revised plan reveals that many of the programs and goals set forth by the 12 municipal open space plans have not been implemented, and as a result many of the overall County goals have not been met. The 2006 revised plan recommends that Wake County and its 12 municipalities modify certain aspects of their open space plans to be more creative, collaborative, aggressive, and ultimately more effective. This Wake Forest Open Space and Greenway Plan Update considers these recommendations, and incorporates them into new goals and objectives.

As Wake County continues to grow in the 21st Century, it is hoped that these current efforts of planning for the protection and conservation of open space will ensure that future generations will have access to the special landscapes and waterways that are unique to the region. Preserving and protecting these resources will also enhance the quality of life for future residents and ensure that this is one of the great places to live, work and raise a family.

MAP 1A: WAKE COUNTY OPEN SPACE & GREENWAY NETWORK

From the *Wake County Open Space Plan*, Revised June 2006



BENEFITS OF OPEN SPACE AND GREENWAYS

Open space and greenways provide a variety of benefits that ultimately affect the sustainability of economic, environmental, and social health. A summary of these benefits can also be found in the Town of Wake Forest brochure, *The Benefits of Open Space and Greenways*. These benefits include:

- creating value and generating economic activity;
- transportation benefits;
- improving health through active living;
- clear skies, clean rivers, and protected wildlife;
- protecting people and property from flood damage; and,
- enhancing cultural awareness and community identity.

CREATING VALUE & GENERATING ECONOMIC ACTIVITY

There are many examples, both nationally and locally, that affirm the positive connection between greenspace and property values[1]. Residential properties will realize a greater gain in value the closer they are located to trails and greenspace. According to a 2002 survey of recent homebuyers by the National Association of Home Realtors and the National Association of Home Builders, trails ranked as the second most important community amenity out of a list of 18 choices[2]. Additionally, the study found that 'trail availability' outranked 16 other options including security, ball fields, golf courses, parks, and access to shopping or business centers. Findings from the Trust for Public Land's Economic Benefits of Parks and Open Space, and the Rails-to-Trails Conservancy's Economic Benefits of Trails and Greenways (listed below) illustrate how this value is realized in property value across the country.

Trails & Greenways Increase Real Property Values:

- Apex, NC: The Shepherd's Vineyard housing development added $5,000 to the price of each of the 40 homes adjacent to the regional greenway, and those homes were still the first to sell[3].

- Front Royal, VA: A developer who donated a 50-foot-wide, seven-mile-long easement along a popular trail sold all 50 parcels bordering the trail in only four months.

- Salem, OR: land adjacent to a greenbelt was found to be worth about $1,200 an acre more than land only 1000 feet away.

- Oakland, CA: A three-mile greenbelt around Lake Merritt, near the city center, was found to add $41 million to surrounding property values.

Apex, NC: The Shepherd's Vineyard housing development added $5,000 to the price of each of the 40 homes adjacent to the regional greenway – and those homes were still the first to sell. (Rails to Trails Conservancy, 2005)

- Seattle, WA: Homes bordering the 12-mile Burke-Gilman trail sold for 6 percent more than other houses of comparable size.

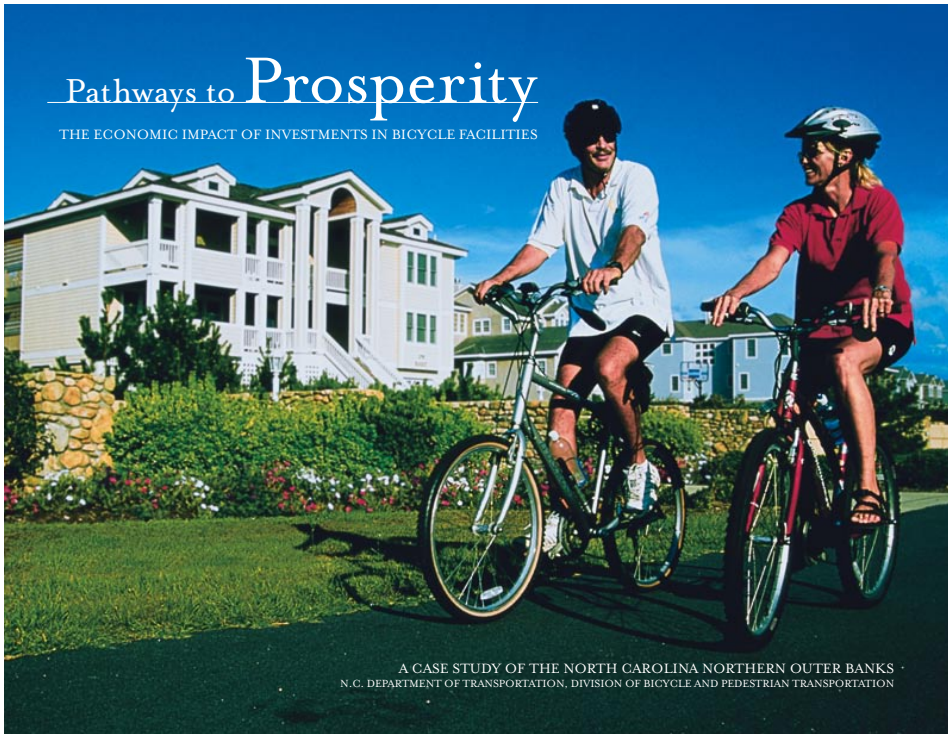
- Brown County, WI: Lots adjacent to the Mountain Bay Trail sold faster and for an average of nine percent more than similar property not located next to the trail.

- Dayton, OH: Five percent of the selling price of homes near the Cox Arboretum and park was attributable to the proximity of that openspace.

Trail Tourism Creates Economic Impacts:
Tourism and recreation-related revenues from trails and greenways come in several forms. Trails and greenways create opportunities in construction and maintenance, recreation rentals (such as bicycles, kayaks, and canoes), recreation services (such as shuttle buses and guided tours), historic preservation, restaurants and lodging.

- The Outer Banks, NC: Bicycling is estimated to have an annual economic impact of $60 million and 1,407 jobs supported from the 40,800 visitors for whom bicycling was an important reason for choosing to vacation in the area. The annual return on bicycle facility development in the Outer Banks is approximately nine times higher than the initial investment[4].

Download the full report, "Pathways to Prosperity", from: http://ncdot.org/transit/bicycle/safety/safety_economicimpact.html



- Damascus, VA: At the Virginia Creeper Trail, a 34-mile trail in southwestern Virginia, locals and non-locals spend approximately $2.5 million annually related to their recreation visits. Of this amount, non-local visitors spend about $1.2 million directly in the Washington and Grayson County economies[5].

- Morgantown, WV: The 45-mile Mon River trail system is credited by the Convention and Visitors Bureau for revitalizing an entire district of the city, with a reported $200 million in private investment as a direct result of the trail[6].

- San Antonio, TX: Riverwalk Park, created for $425,000, has surpassed the Alamo as the most popular attraction for the city's $3.5-billion tourism industry[7].

- Tallahassee, FL: The Florida Department of Environmental Protection Office of Greenways & Trails estimate an economic benefit of $2.2 million annually from the 16-mile St. Marks Trail[8].

- Allegheny Passage, PA: The direct economic impact of the trail exceeded $14 million a year, encouraging the development of several new businesses and a rise in property values in the first trailhead town.

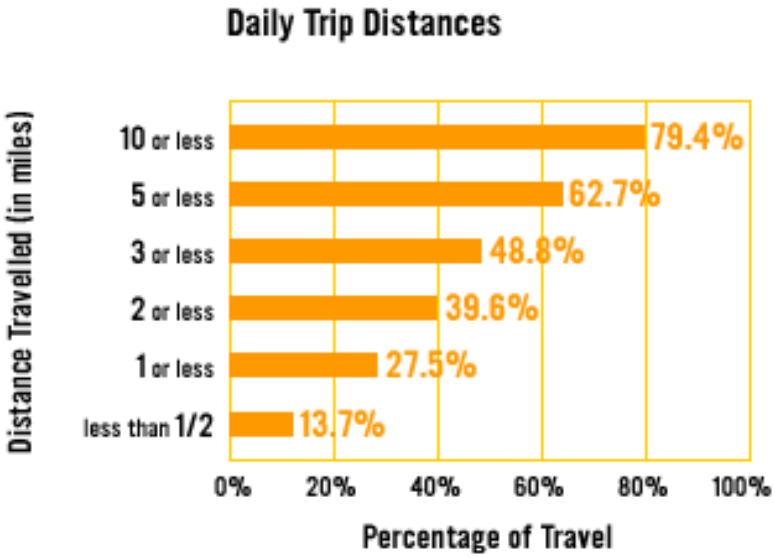
- Leadville , CO: In the months following the opening of the Mineral Belt Trail, the city reported a 19 percent increase in sales tax revenues.

- Dallas, TX: The 20-mile Mineral Wells to Weatherford Trail attracts 300,000 people annually and generates local revenues of $2 million.

Damascus, VA is able to market itself to trail users, and it reaps the rewards for doing so.

TRANSPORTATION BENEFITS

The sprawling nature of many land development patterns often leaves residents and visitors with no choice but to drive, even for short trips. In fact, nearly two-thirds (62.7%) of all trips we make are for a distance of five miles or less (see chart on page 1-9). Surveys by the Federal Highway Administration show that Americans are willing to walk as far as two miles to a destination and bicycle as far as five miles. A complete trail network, as part of the local transportation system, will offer effective transportation alternatives by connecting homes, workplaces, schools, parks, downtown, and cultural attractions.



Right: 'Daily Trip Distances' chart from the Bicycle and Pedestrian Information Center website, www.pedbikeinfo.org

Trail networks can provide alternative transportation links that are currently unavailable. Residents who live in subdivisions outside of downtown areas are able to walk or bike downtown for work, or simply for recreation. Residents are able to circulate through urban areas in a safe, efficient, and fun way: walking or biking. Residents are able to move freely along trail corridors without paying increasingly high gas prices and sitting in ever-growing automobile traffic. Last but not least, regional connectivity through alternative transportation could be achieved once adjacent trail networks are completed and combined.

IMPROVING HEALTH THROUGH ACTIVE LIVING

Greenway trails in Wake Forest will contribute to the overall health of residents by offering people attractive, safe, accessible places to bike, walk, hike, jog, skate, and possibly places to enjoy water-based trails. In short, the greenway network will create better opportunities for active lifestyles. The design of our communities—including towns, subdivisions, transportation systems, parks, trails and other public recreational facilities—affects people's ability to reach the recommended 30 minutes each day of moderately intense physical activity (60 minutes for youth). According to the Centers for Disease Control and Prevention (CDC), "Physical inactivity causes numerous physical and mental health problems, is responsible for an estimated 200,000 deaths per year, and contributes to the obesity epidemic." [9]

In identifying a solution, the CDC determined that by creating and improving places in our communities to be physically active, there could be a 25 percent increase in the percentage of people who exercise at least three times a week[10]. This is significant considering that for people who are inactive, even small increases in physical activity can bring measur-

able health benefits. [11] Additionally, as people become more physically active outdoors, they make connections with their neighbors that contribute to the health of their community.

Many public agencies are teaming up with foundations, universities, and private companies to launch a new kind of health campaign that focuses on improving people's options instead of reforming their behavior. A 2005 Newsweek Magazine feature, Designing Heart-Healthy Communities, cites the goals of such programs (italics added): "The goals range from updating restaurant menus to restoring mass transit, but the most visible efforts focus on making the built environment more conducive to *walking and cycling*."[12] Clearly, the connection between health and greenways is becoming common knowledge. The Rails-to-Trails Conservancy puts it simply: "Individuals must choose to exercise, but communities can make that choice easier."

CLEAR SKIES, CLEAN RIVERS, AND PROTECTED WILDLIFE

There are a multitude of environmental benefits from trails, greenways, and open spaces that help to protect the essential functions performed by natural ecosystems. Greenways protect and link fragmented habitat and provide opportunities for protecting plant and animal species. Trails and greenways reduce air pollution by two significant means: first, they provide enjoyable and safe alternatives to the automobile, which reduces the burning of fossil fuels; second, they protect large areas of plants that create oxygen and filter air pollutants such as ozone, sulfur dioxide, carbon monoxide and airborne particles of heavy metal. Greenways improve water quality by creating a natural buffer zone that protects streams, rivers and lakes, preventing soil erosion and filtering pollution caused by agricultural and road runoff.

As an educational tool, trail signage can be designed to inform trail-users about water quality issues particular to each watershed. Such signs could also include tips on how to improve water quality. Similarly, a greenway can serve as a hands-on environmental classroom for people of all ages to experience natural landscapes, furthering environmental awareness.

PROTECTING PEOPLE AND PROPERTY FROM FLOOD DAMAGE

The protection of open spaces associated with greenway development often also protects natural floodplains along rivers and streams. According to the Federal Emergency Management Agency (FEMA), the implementation of floodplain ordinances is estimated to prevent $1.1 billion in flood damages annually. By restoring developed floodplains to their natural state and protecting them as greenways, many riverside communities are preventing potential flood damages and related costs. [13]

ENHANCING CULTURAL AWARENESS & COMMUNITY IDENTITY

Trails, greenways, and open space can serve as connections to local heritage by preserving historic places and by providing access to them. They provide a sense of place and an understanding of past events by drawing greater public attention to historic and cultural locations and events. Trails often provide access to historic sites such as battlegrounds, bridges, buildings, and canals that otherwise would be difficult to access or interpret. Each community and region has its own unique history, its own features and destinations, and its own landscapes. By recognizing, honoring, and connecting these features, the combined results serve to enhance cultural awareness and community identity, potentially attracting tourism. Being aware of the historical and cultural context when naming parks and trails and designing features will further enhance the overall trail- and park-user experience.

Chapter 1 Footnotes

1 American Planning Association. (2002). How Cities Use Parks for Economic Development.

2 National Association of Realtors and National Association of Home Builders. (2002). Consumer's Survey on Smart Choices for Home Buyers.

3 Rails to Trails Conservancy. (2005). Economic Benefits of Trails and Greenways.

4 NCDOT and ITRE. (2006). Bikeways to Prosperity: Assessing the Economic Impact of Bicycle Facilities.

5 Virginia Department of Conservation. (2004). The Virginia Creeper Trail: An Assessment of User Demographics, Preferences, and Economics.

6 Rails to Trails. (Danzer, 2006). Trails and Tourism.

7 American Planning Association. (2002). How Cities Use Parks for Economic Development.

8 Rails to Trails. (Danzer, 2006). Trails and Tourism.

9 U.S. Department of Health and Human Services, Centers for Disease Control and Prevention. (1996). Physical Activity and Health: A Report of the Surgeon General.

10 U.S. Department of Health and Human Services, Centers for Disease Control and Prevention. (2002). Guide to Community Preventive Services.

11 Rails-to-Trails Conservancy. (2006) Health and Wellness Benefits.

12 Newsweek Magazine. (10/3/2005). Designing Heart-Healthy Communities.

13 Federal Emergency Management Agency. (2005) Building Stronger: State and Local Mitigation Planning.